

amount of energetic plasticizer wherein the plasticizer to polymer ratio is less than about 1.6:1 [and wherein the elongation at maximum stress is at least 200%].

Rewrite claim 43 as follows:

43 (Twice Amended). A reduced energy binder for energetic compositions comprising an amount of cured poly(tetramethylene adipate) [polyester polyol] polymer cured from a hydroxy-terminated adipate prepolymer having an uncured prepolymer molecular weight (MW_n) of at least 4,000 in combination with an amount of one or more energetic plasticizers, wherein the ratio of plasticizer to polymer is less than 1.6:1.

Rewrite claims 51-53 as follows:

51 (Twice Amended). An improved high solid propellant composition comprising by weight:

- (a) about 10% cured poly(tetramethylene adipate) ([uncured] cured from a hydroxy-terminated adipate prepolymer $MW_n \geq 6000$) binder polymer;
- (b) about 11% nitroglycerin plasticizer;
- (c) about 2.5% triacetin plasticizer;
- (d) about 22% aluminum; and
- (e) about 53% ammonium perchlorate oxidizer.

52 (Twice Amended). An improved high solids propellant composition comprising by weight:

- (a) about 7% cured poly(tetramethylene adipate) ([uncured] cured from a hydroxy-terminated adipate prepolymer, $MW_n \geq 6000$) binder polymer;
- (b) about 6.5% n-butyl-2-nitratoethyl nitramine;
- (c) about 1.4% triacetin;
- (d) about 22% aluminum;
- (e) about 60% ammonium perchlorate; and
- (f) about 2% dicyandiamide.

53(Twice Amended). An improved reduced energy binder for energetic compositions comprising an amount of cured poly(tetramethylene adipate) polyester [polyol] polymer cured from a hydroxy-terminated adipate prepolymer having an uncured prepolymer molecular weight (MW_n) of at least 6,000 in combination with an amount of one or more energetic plasticizers and wherein the ratio of plasticizer to polymer is less than 1.6:1.

Rewrite claim 62 and 63 as follows:

62(Twice Amended). An improved high solids propellant composition comprising by weight:

- (a) about 11% cured poly(tetramethylene adipate) (cured from a hydroxy-terminated adipate prepolymer, MW_n [(uncured)] about 6,000) binder polymer;

- (b) about 12% plasticizer selected from the group consisting of nitroglycerin and trimethylolethane trinitrate and combinations thereof;
- (c) about 22% aluminum; and
- (d) about 53% ammonium perchlorate.

63 (Twice Amended). An improved high [solid] solids propellant composition comprising by weight:

- (a) about 11.3% cured poly (tetramethylene adipate) (cured from a hydroxy-terminated adipate prepolymer [(uncured)], MW_n about 6,200) binder polymer;
- (b) about 12.2% nitroglycerin plasticizer;
- (c) about 22% (30 μ) aluminum; and
- (d) about 53% (200 μ) ammonium perchlorate oxidizer.

REMARKS

In accordance with the above amendments, claims 43, 51-53, 62-63 have been amended. Claims 38-64 remain under consideration in this application with no claim having yet been allowed.

The Examiner has raised certain issues in the Action by rejecting claims 38-64 under 35 USC 112, second paragraph, based on indefiniteness. It is hoped that the claims as amended now provide all necessary antecedents with respect to the uncured prepolymer references and that all of the descriptions of the binder polymer come properly under the definition "hydroxy-terminated adipate polymer". The recitation of an elongation of